

THAT WHICH IS CLAIMED:

1. A system adapted to determine a property of a paving-related material, said system comprising:

a measuring device for selectively and directly measuring the property of the paving-related material;

a computer device capable of executing a software program product and communicating with the measuring device, the computer device being configured to direct the measuring device to measure the property of the paving-related material according to a parameter determined by the software program product, and to receive data comprising the measured

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a communication element operably engaged between the measuring device and the computer device so as to allow communication therebetween, the communication element being configured to allow the computer device to be spaced apart from the measuring device, thereby allowing the computer device to be prepared, to include the parameter and to manipulate the data, in spaced apart relation with respect to the measuring device.

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2. A system according to Claim 1 wherein the communication element comprises a wire element extending and connected between the computer device and the measuring device.

3. A system according to Claim 2 wherein the wire element is further configured to be removably engaged with at least one of the computer device and the measuring device.

4. A system according to Claim 1 wherein the communication element further comprises a connector having a first portion configured to be removably engaged with a second portion.

5. A system according to Claim 4 wherein the first portion is engaged with the computer device and the second portion is engaged with the measuring device.

6. A system according to Claim 4 wherein the first portion is engaged with the computer device and the second portion is engaged with a wire element extending and connected to the measuring device.

7. A system according to Claim 4 wherein the first portion is engaged with the measuring device and the second portion is engaged with a wire element extending and connected to the computer device.

8. A system according to Claim 1 wherein the communication element comprises a wireless transceiver operably engaged with each of the computer device and the measuring device, the wireless transceivers being configured to be capable of communication therebetween.

9. A system according to Claim 1 further comprising a locating device operably engaged with at least one of the measuring device and the computer device, the locating device being configured to determine a location of the at least one of the measuring device and the computer device.

10. A system according to Claim 1 further comprising a central computing system spaced apart from the computer device and the measuring device and configured to be capable of communicating the data with the computer device.

11. A system according to Claim 10 wherein the central computing system is configured to communicate with the computer device so as to modify the software program product.

12. A system according to Claim 1 wherein the measuring device is configured to be capable of performing a plurality of functions and the software program

product is configured to be capable of directing the measuring device to perform a combination of functions selected from the plurality of functions.

13. A system according to Claim 12 wherein at least one function in the plurality of functions is configured to determine the parameter used to measure the property of the material.

14. A system according to Claim 1 wherein the measuring device is further configured to directly measure at least one of a density, a density-related parameter, and a moisture content of at least one of a soil, an aggregate, and an asphalt paving mix.

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15. A system according to Claim 1 wherein the measuring device is selected from the group consisting of a nuclear density gauge, a nuclear moisture gauge, a seismic pavement analyzer, a stiffness gauge, a falling weight deflectometer, a ground penetrating radar device, a radio frequency device, an electromagnetic device, a microwave device, a surface roughness measuring device, a pavement temperature sensor, a pavement temperature measuring device, and combinations thereof.

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16. A system according to Claim 1 wherein the computer device is further configured to direct the data to a third party computer device without allowing the data to be modified.

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17. A system according to Claim 1 wherein the computer device is further configured to associate a time and date stamp with the data when the property is measured.

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18. A method of determining a property of a paving-related material, said method comprising:

preparing a computer device to execute a software program product for directing a measuring device to directly measure the property of the paving-related material, according to a parameter determined by the software program

product, and to receive data comprising the measured property of the paving-related material from the measuring device;  
executing the software program product;  
communicating the executed software program product from the computer device to the measuring device via a communication element operably engaged therebetween, the communication element being configured to allow the computer device to be spaced apart from the measuring device such that the computer device can be prepared, in spaced apart relation with respect to the measuring device, to include the parameter and to manipulate the data.

10           19.    A method according to Claim 18 communicating the data comprising the measured property of the paving-related material from the measuring device to the computer device via the communication element.

20.    A method according to Claim 18 wherein the communication element comprises a wire element, and the method further comprises removably engaging the wire element with at least one of the computer device and the measuring device such that the wire elements extends and is connected between the computer device and the measuring device.

21.    A method according to Claim 18 wherein the communication element comprises a connector having a first portion engaged with the computer device and a second portion engaged with the measuring device, and the method further comprises removably engaging the first portion with the second portion.

22.    A method according to Claim 18 wherein the communication element comprises a connector having a first portion engaged with the computer device and a second portion engaged with a wire element extending and connected to the measuring device, and the method further comprises removably engaging the first portion with the second portion.

23. A method according to Claim 18 wherein the communication element comprises a connector having a first portion engaged with the measuring device and a second portion engaged with a wire element extending and connected to the computer device, and the method further comprises removably engaging the first portion with the second portion.

24. A method according to Claim 18 wherein the communication element comprises a wireless transceiver operably engaged with each of the computer device and the measuring device, and the method further establishing communication between the wireless transceivers so as to allow the computer device to communicate with the measuring device.

25. A method according to Claim 18 further comprising determining a location of at least one of the measuring device and the computer device with a locating device operably engaged with at least one of the measuring device and the computer device.

26. A method according to Claim 19 further comprising communicating at least one of the data and a modification of the software program product between the computer device and a central computing system spaced apart from the computer device and the measuring device.

27. A method according to Claim 18 wherein the measuring device is configured to be capable of performing a plurality of functions and preparing the computer device to execute the software program product further comprises preparing the computer device to execute the software program product, the software program product being capable of directing the measuring device to perform a combination of functions selected from the plurality of functions and at least one function in the plurality of functions being configured to determine the parameter used to measure the property of the material.

28. A method according to Claim 18 wherein preparing a computer device further comprises preparing a computer device to execute a software program product for directing a measuring device to directly measure at least one of a density, a density-  
5 related parameter, and a moisture content of at least one of a soil, an aggregate, and an asphalt paving mix.

29. A method according to Claim 18 wherein preparing a computer device further comprises preparing a computer device to execute a software program product for  
10 directing a measuring device comprising at least one of a nuclear density gauge, a nuclear moisture gauge, a seismic pavement analyzer, a stiffness gauge, a falling weight deflectometer, a ground penetrating radar device, a radio frequency device, an electromagnetic device, a microwave device, a surface roughness measuring device, a pavement temperature sensor, a pavement temperature measuring device, to directly  
15 measure the property of the paving-related material.

30. A method according to Claim 19 further comprising directing the data from the computer device to a third party computer device without allowing the data to be modified.

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31. A method according to Claim 18 further comprising associating a time and date stamp with the data when the property is measured.

32. A system adapted to cooperate with a measuring device to selectively and directly measure a property of a paving-related material, said system comprising:

a computer device capable of executing a software program product and  
25 communicating with the measuring device, the computer device being configured to direct the measuring device to measure the property of the paving-related material according to a parameter determined by the software program product, and to receive data comprising the measured property of the paving-related material from the measuring device; and

a communication element operably engaged between the measuring device and the computer device so as to allow communication therebetween, the communication element being configured to allow the computer device to be spaced apart from the measuring device, thereby allowing the computer device to be prepared, to include the parameter and to manipulate the data, in spaced apart relation with respect to the measuring device.

33. A system according to Claim 32 wherein the communication element comprises a wire element extending and connected between the computer device and the measuring device.

34. A system according to Claim 33 wherein the wire element is further configured to be removably engaged with at least one of the computer device and the measuring device.

35. A system according to Claim 32 wherein the communication element further comprises a connector having a first portion configured to be removably engaged with a second portion.

36. A system according to Claim 35 wherein the first portion is engaged with the computer device and the second portion is engaged with the measuring device.

37. A system according to Claim 35 wherein the first portion is engaged with the computer device and the second portion is engaged with a wire element extending and connected to the measuring device.

38. A system according to Claim 35 wherein the first portion is engaged with the measuring device and the second portion is engaged with a wire element extending and connected to the computer device.

39. A system according to Claim 32 wherein the communication element comprises a wireless transceiver operably engaged with each of the computer device and the measuring device, the wireless transceivers being configured to be capable of communication therebetween.

40. A system according to Claim 32 further comprising a locating device operably engaged with at least one of the measuring device and the computer device, the locating device being configured to determine a location of the at least one of the measuring device and the computer device.

41. A system according to Claim 32 wherein the computer device is further configured to direct the data to a third party computer device without allowing the data to be modified.

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42. A system according to Claim 32 wherein the computer device is further configured to associate a time and date stamp with the data when the property is measured.